ACC.14
TCT@ACC-i2 | innovation in intervention

A1339
JACC April 1, 2014
Volume 63, Issue 12

# Prevention

## THE OBESITY PARADOX IN TYPE II DIABETES MELLITUS: IMPACT OF BODY MASS INDEX ON PROGNOSIS

Poster Contributions
Hall C
Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Prevention: Diabetes, Obesity, and Lifestyle
Abstract Category: 20. Prevention: Clinical
Presentation Number: 1144-129

Authors: *Pierluigi Costanzo, Pierpaolo Pellicori, John Cleland, Andrew Clark, Eric Kilpatrick, David Hepburn, Pasquale Perrone-Filardi, Jufen Zhang, Stephen Atkin, University of Hull, Kingston upon Hull, United Kingdom*

**Background:** Obese patients with type two diabetes mellitus (T2DM) may have a better prognosis than patients of normal weight, but reports are limited by study size, duration and confounders.

**Methods:** We investigated the relationship between body mass index (BMI) and prognosis in 10,568 patients with T2DM without known CV disease followed for a median of 10.6 (IQR: 7.8- 13.4) years. Hospital admissions for acute coronary syndrome (ACS), cerebrovascular accidents (CVA), heart failure (HF) and all-cause mortality were recorded. Information on comorbidity (cancer, lung diseases and chronic renal failure) and other confounding factors were also gathered.

**Results:** Median age was 63±19 years, 54% were men and median BMI was 28.8 (IQR: 25.2-32.4 kg.m2). Adjusting for differences in age and other variables, patients in the highest quartile of BMI had the greatest risk of hospitalization for ACS or HF (HRs with 95% CI for highest versus lowest quartile were 1.39; 1.14-1.70 p=0.001 and 1.36; 1.08-1.71 p=0.01 respectively) but the risk of CVA was similar amongst BMI quartiles. However, patients in higher BMI quartiles had lower mortality rates, with the nadir of the risk lying in the overweight range of BMI (25-30 kg/m2, adjusted for confounders). Furthermore, greater BMI was associated with lower mortality especially amongst older patients.

**Conclusion:**Patients with T2DM and moderately increased BMI, in the overweight range of 25-30 kg/m2, have a lower mortality than patients normal weight. Amongst older patients, even higher BMI were associated with lower risk of all-cause mortality. However, obesity is associated with an increased risk of hospitalization for cardiovascular events.